

# MARINE RECREATIONAL INFORMATION PROGRAM

**FY Project Plan**

**Panel Survey Pilot Study to Quantify Differences between Trips Covered and Trips Not  
Covered by On-Site Intercept Surveys**

**Created on**

# 1. Overview

## 1.1. Background

Generally, recreational fishing catch data are collected by trained field samplers at publicly-accessible fishing access sites such as bridges, piers, beaches, boat ramps and public marinas, during daylight hours. Current survey methods assume that these data accurately represent all fishing trips, including those trips that return to sites that are not accessible to field samplers, such as private residences, and those trips that conclude during the night. This assumption, which has not been tested, was identified as a possible source of bias by the National Research Council (NRC) in their review of recreational fishing survey methods.

Fishing effort data, which are collected through offsite survey methods, indicate that 35-45% of fishing effort either occurs at or returns to sites that are inaccessible to samplers (Figure 1). The undercoverage of these trips by access-point intercept surveys introduces the potential for bias in estimates of catch rate.

The error associated with retrospective recall of catch—and the specifics of the catch—have been the prime justifications for the on-site sampling of anglers and collection of catch information. To preserve the real-time collection of catch information (or relatively close proximity of the data collection to the actual catch), a prospective design—one in which the anglers are recruited prior to the fishing trips of interest—is proposed for the comparison of catch information from private vs. public access anglers.

### Sample Design

This study will investigate the use of a diary to determine its effectiveness to capture catch, type of species, and demographic information from anglers accessing both public and private access sites. This approach has been successful in the National Recreational Fishing Survey conducted in Australia in 2000. Using this approach, data will be collected in NC and Florida, two states who have documented approximately 30% of trips from private access sites.

A dual-frame approach will sample anglers for both states. Since some anglers are not required to purchase a license, not all anglers in the target population are listed in the license frame for either state. Therefore, an additional frame that lists all addresses serviced by the USPS will be used as a supplemental sample frame.

The first frame is a list of anglers who have purchased a saltwater fishing license in NC/Florida. The second frame will be an address frame of all residential addresses in NC/Florida that are serviced by the USPS. These two frames will overlap in both states since the list frame of anglers is a subset of the address frame of residences in each state. Overlapping units (i.e. units that could be sampled from both frames) will be identified by matching addresses.

Within each frame, a stratified design will be used. It is expected there will be a higher incidence of fishing in coastal counties. Two strata will be developed based on county location and the proximity to the coast. One stratum will consist of coastal counties and the other strata will consist of non-coastal counties. It is expected proportional allocation will be used in the license frame based on the total number of licenses in the license frame. Equal allocation based on the number of households will be considered in the coastal and non-coastal regions for the address frame.

Panelists (i.e., anglers) from each frame will be recruited via a mail screening questionnaire. Panelists will then be asked to provide fishing data either by telephone or an online reporting tool. Specifically, anglers will be asked to participate in a diary survey, recording trips and catch information over the course of a year. At a minimum, anglers will be asked to report fishing activities at 1-month intervals. More avid anglers will be asked to report more frequently. Each of these frames is discussed separately.

### License Frame

For each state, a list of licensed saltwater anglers residing in NC/FL will be used as a frame to select a sample of 1,080 licenses to recruit into the study for each state. A stratified random sampling design is proposed. Each license on the sample frame denotes one angler.

To be included on a license frame, anglers must have a valid saltwater fishing license at the time of the sample selection. It is expected that there is a response rate of approximately 40% for the angler selected from the license frame. Approximately 30% of anglers are expected to fish from private access. In addition, approximately 75% of anglers are expected to complete the diary. We anticipate that the license frame will yield approximately 95 anglers using private access and 220 using public access within each state.

### Address Frame

In the mail approach, a list of 4,550 household addresses will be obtained from the USPS address-based frame. A stratified two-stage design is proposed for this approach. The address frame includes two strata, the coastal and non-coastal counties. There will be a higher number of households in the non-coastal counties due to the demographics of the State. However, households located on the coast are expected to have higher rates of fishing incidence. An equal allocation of households is proposed for the address frame across the two strata.

In the first step of this study, a random sample of 4,550 households will be mailed a screener questionnaire to identify saltwater anglers. It is expected that 10% of addresses will be undeliverable and a screening rate of 40% is assumed. We also assume a household fishing incidence rate of 32%. From this group, we assumed an 80% participation rate. Finally, we assumed that 75% of these anglers would complete the diary. Approximately 30% of anglers are expected to fish from private access. We anticipate that the address frame will yield approximately 95 anglers using private access and 220 using public access.

The objectives of this study are:

1. To provide data to address a number of research questions concerning differences between public-access and private-access anglers
2. Test the feasibility of conducting panel studies of anglers, using alternative methodologies, for the purpose of collecting both effort and catch information.

Specifically, the research questions to be addressed include:

- To what extent do public access and private access anglers differ with respect to species targeted, caught, and caught and released?
- To what extent do public access and private access anglers differ with respect to the size of the catch (number of fish) per trip?
- To what extent do public access and private access anglers differ with respect to demographic characteristics (residency, age) and fishing behavior (avidity, possession of a fishing license)?

The study will also yield information as to the feasibility of collecting catch information over time from a panel of anglers. As part of the design, the study will examine the feasibility of longitudinal data collection using both a methodology tested in Australia (that combines self-administered mail diaries with phone interviews) and a web-based data collection effort (with email and phone reminders). The information derived from the study will inform future designs concerning the feasibility of web-based and diary-based data collection for effort and catch information.

## **1.2. Project Description**

## **1.3. Objectives**

## **1.4. References**

## **2. Methodology**

### **2.1. Methodology**

### **2.2. Regions**

### **2.3. Geographic Coverage**

### **2.4. Temporal Coverage**

### **2.5. Frequency**

### **2.6. Unit of Analysis**

### **2.7. Collection Mode**

# 3. Communications Plan

## 3.1. Internal

## 3.2. External

## **4. Assumptions and Constraints**

### **4.1. New Data**

### **4.2. Track Costs**

### **4.3. Funding Vehicle**

ST Data Collection Contract

### **4.4. Data Resources**

### **4.5. Other Resources**

### **4.6. Regulations**

### **4.7. Other**

Assume a reasonable percentage of panelists will be willing to continue participation in project throughout the course of a year.

# 5. Risk

## 5.1. Project Risk

Table 1: Project Risk

Risk Description	Risk Impact	Risk Probability	Risk Mitigation Approach
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## **6. Final Deliverables**

### **6.1. Additional Reports**

Study design document describing methodology; Report on study findings

### **6.2. New Data Sets**

### **6.3. New Systems**

# 7. Project Leadership

## 7.1. Project Leader and Members

Table 2: Project Members

Project Role	Name	Organization	Title
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## 8. Project Estimates

### 8.1. Project Schedule

Table 3: Project Schedule - Major Tasks and Milestones

#	Schedule Description	Planned Start	Planned Finish	Prerequisites	Milestones
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### 8.2. Cost Estimates

Table 4: Cost Estimates

Project Need	Cost Description	Date Needed	Estimated Cost
TOTAL			\$0.00